

TACTICAL HANDHELD RADIO (THHR)



**Ground C2 OAG Status
Brief AN/PRC-148(V)1(C)
And
AN/PRC-148(V)2(C)
(Maritime and Urban
Versions)**

USMC Project Officers:

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Background

- The Marine Corps Combat Development Command (MCCDC) identified an immediate need for a multi-band hand held radio because the current inventory of tactical hand held and survival radios have exceeded their lifecycles.
- **MCCDC Originated a Statement of Need with an Approved Acquisition Objective (AAO) of 2069 AN/PRC-148(V)1 & AN/PRC-148(V)2**
 - **Provided fixed distribution to MCSC for procurement.**
 - **MCSC does not control the Acquisition Objective or distribution.**
- Marine Corps Systems Command (MCSC) entered into a cooperative effort with USSOCOM to develop the Multi-Band Inter/Intra Team Radio,

Description

- MULTIBAND INTER/INTRA TEAM RADIO
 - 30-512 MHz AM and FM Transceiver
 - Embedded Type 1 encryption
 - 2 versions -
 - AN/PRC-148(V)1(C) (immersible to 66 feet) **MARITIME**
 - AN/PRC-148(V)2(C) (immersible to 6 feet) **URBAN**



System Description

- A lightweight, durable, and compact radio, providing secure multi-band, voice and data communications for use by Marine Recon units and infantry platoons.
- Capable of replacing the AN/PRC-68A radio and numerous COTS radios.
- Contains internal communications security.
- The THHR will provide



- Operates in the 30-512 MHz frequency range and is capable of communications in the following bands:
 - VHF FM/AM
 - UHF AM (Air to Ground)
 - UHF FM (LOS)
 - UHF FM (Public Service).
- The THHR will communicate with SINCGARS and HAVEQUICK II in the frequency hopping mode.

System Description

Continued

- **Frequency Range:**
 - **30-512 MHz Contiguous**
 - **5 and 6.25 kHz steps**
- **Modulation Types:**
 - **AM & FM Voice/Data**
- **Transmit Output Power:**
 - **User Selectable @ 0.1, 0.5, 1.0, 3.0 & 5.0 Watts**
- **US Type 1 COMSEC**
- **Immersion Fresh/Saltwater:**
 - **Urban 30 mins @ 6 ft**
 - **Maritime 2 hr. @ 66 ft**
- **Reliability:**
 - **MTBF: > 11,400 hours**
- **Interoperability:**
 - **AN/PRC-77, AN/VRC-12, AN/PRC-68, AN/PRC-117A-D, AN/PRC-119A/B, AN/PRC-113, AN/PRC-139, Motorola Saber, AN/PRC-126, AN/PRC-127**



- **Emergency Beacons and GPS:**
 - **AM Swept Tone Beacon**
 - **GPS Interface to PLGR**
- **Programmable Channels:**
 - **100 Memory Preset Channels**
- **Controls & Indicators - (All NVG Compatible)**
- **32 x 80 Pixel Backlit LCD**
- **Intuitive Menu Driven User Interface**
- **Physical Parameters (with battery):**
 - **Length: 7.75 inches (19.7 cm)**
 - **Width: 2.63 inches (6.68 cm)**
 - **Depth: 1.45 inches (3.68 cm)**
 - **Volume: 29.6 cu. inches (484.27 cubic cm)**
 - **Weight: 32 ounces (907.2 gm)**
- **Finish: NBC Compatible**
 - **Matte Black, Non-Reflective**

Interoperability

Interoperability Test	Demonstrated						
	AM	FM	PT	CT	KY-57 External	LOS	NLOS
AN/PRC-119 - SINCGARS		X	X	16		X	
PRC6725E - Pintail		X	X	16/12		X	
AN/PRC-117A/D/F	X	X	X	16		X	
AN/PRC-113	X		X	16/12	X	X	X
AN/PRC-112A/C	X		X			X	
MX-300B6/B12		X	X	12		X	
TR720A/B/C		X	X			X	
Saber5/G6		X	X	12		X	
PSC-5C/D/E/F/G	X	X	X	16		X	X
LST-5C			X	16/12	X		X

System Components Continued



Key Fielding Dates

Fielding Decision	30
April 01	
Begin Fielding/	25
May 01	
New Equipment Training (NET)	
Complete Fielding	4th
Qtr FY02	

Projected Delivery Schedule

UNIT	<u>Anticipated Delivery Date</u>
Force Recon Co, I MEF	Complete
Force Recon Co, II MEF	Complete
Force Recon Co, MARFORRES	Complete
HqSvcCo, 1st Radio Bn, MARFORPAC	Complete
Second RADBN, II MEF	Complete
HqSvcCo, Recon Bn, 1st MarDiv	Complete
HqSvcCo, Recon Bn, 2nd MarDiv	Complete
HqSvcCo, Recon Bn, 3rd MarDiv	Complete
Distance Recon Co, 3rd MarDiv	Complete
Deep Recon Co, Recon Bn 3rd MarDiv	Complete
HqSvcCo, Recon Bn, 4TH MarDiv	Complete

Projected Delivery Schedule

RIFLE CO, INF BN, 1ST MARDIV	Complete
RIFLE CO, INF BN, 2D MARDIV	Complete
RIFLE CO, INF BN, 3D MARDIV	Complete
RIFLE CO, INF BN, 3D MARDIV (HI)	Complete
RIFLE CO, INF BN, 4TH MARDIV	Complete
HqBtry, Arty Regt, 1st MarDiv	Complete
HqBtry, Arty Bn, (M198), Arty Regt, 1st MarDiv	Complete
HqBtry, Arty Regt, 2d MarDiv	Complete
HqBtry, Arty Bn, (M198), Arty Regt, 2d MarDiv	Complete
HqBtry(-), Arty Regt, 3D MarDiv	Complete
HqBtry, Arty Bn, (M198), Arty Regt, 3D MarDiv	Complete
HqBtry, Arty Bn, (M198), Arty Regt, 3d MarDiv Hi	Complete
HqBtry, Arty Regt, 4th MarDiv	Complete

Projected Delivery Schedule

HqBtry, Arty Regt, 4th MarDiv	Complete
HqBtry, Arty Bn, (M198), Arty Regt, 4th MarDiv	Complete
EWTGPAC	Complete
EWTGLANT	Complete
IOC, MCCDC	Oct-02
CCSS, MCCDC	Oct-02
SOTG I MHG	Oct-02
SOTG II MHG	Oct-02
SOTG III MHG	Oct-02
MCTSSA	Oct-02
MARFORPAC	Oct-02
Comm Co, 1st FSSG	Oct-02
Comm Co, 2nd FSSG	Oct-02
Comm Co, 3rd FSSG	Oct-02
Hq MEU, I MEF	Oct-02

Projected Delivery Schedule

SOTG III MHG	Oct-02
MCTSSA	Oct-02
MARFORPAC	Oct-02

New Equipment Training

NET -

- Dates and locations for NET will be scheduled to coincide with fielding by unit.
- Program office will coordinate with Thales Corporation.
 - Additionally, radio comes with a CD containing Interactive Computer Based Training (CBT) and Electronic Operator's TM, and hard copy of the TM.

Maintenance Concept

- **Organizational Maintenance**

- Preventative maintenance.
 - Test by BIT
 - Float Inoperative RT's.

- **Intermediate Maintenance**

- Fault verification by BIT.
 - Submit WIR to Albany.
 - As directed by Albany, ie., ship RT to Thales.

- **Depot Maintenance**

- Performed by the equipment manufacturer, Thales Corporation.

Warranty

- One year failure-free warranty subject to normal wear and tear.
- One year free contractor depot level maintenance.
 - (Second year of warranty)
- MARCORLOGBASES Albany, GA is the Warranty Administrator.

Issues

- MCMO
 - **The AN/PRC-148(V) is ALC 1.**
- Spectrum Managers
 - **Spectrum Support for radios - additional nets.**
 - **Local Procedures to ensure operation on approved frequencies only.**

Future Endeavors

- POM – 04/05 Submission
- POM – 03 UPL
 - Additional 3,354 radios
 - 620 FY-04
 - 705 FY-05
 - Rolled up in the JTRS family of radios
 - Addresses the HQ elements and Weapons Co.
 - Increases Inf Bn. Allowance

High Frequency Manpack Radio (HFMR)

Ground C2 OAG Status Brief AN/PRC-150(C)



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Background

- The Marine Corps Combat Development Command (MCCDC) identified an immediate need for a interim HF Man-Pack radio to be fielded to designated units, in limited quantities, to meet specific mission requirements.
- **MCCDC Originated a Statement of Need with an Approved Acquisition Objective (AAO) of 306 AN/PRC-150(C).**
 - **Provided fixed distribution to MCSC for procurement.**
 - **MCSC does not control the Acquisition Objective or distribution.**
- Marine Corps Systems Command (MCSC) entered into a cooperative effort with USSOCOM to develop the Multi-Band Inter/Intra Team Radio, AN/PRC-150(C).

HFMR Description

- The HFMR provides Beyond Line-of-Sight(BLOS) in Upper Side Band (USB), Lower Side Band (LSB), Amplitude Modulation (AM) Equivalent and Continuous Wave (CW) modes as well as Line-of-Sight (LOS) communication in Frequency Modulation (FM) mode.

- Frequency Range: HF1.6 - 29.9999 MHz In BLOS modes and 20-59.9999MHz in FM mode in 10 Hz Steps

- Full Built In Test (BIT)
- Advanced Digital Signal Processing

- Secure and Non-Secure Voice or Data Communications

- Embedded Crypto in upgraded version

- Manpack with 60% weight reduction over legacy equipment

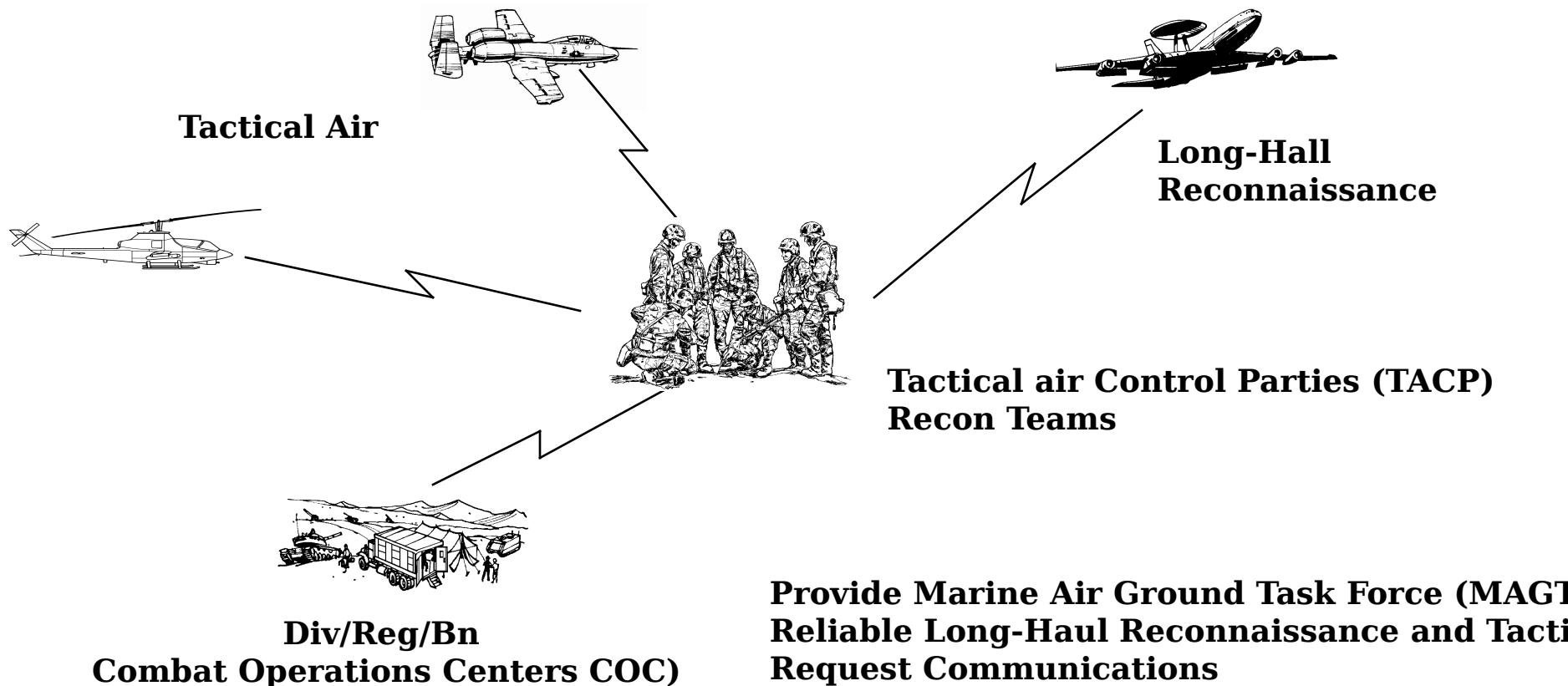
HFMR will replace 306 of the AN/PRC-104B(V)1 and the AN/PRC-104 in specific

RADIO SET (RS) AN/PRC-138B(V)1



HFMR

Concept of Employment



Program Events

- USMC Statement of Need Oct 99
- Fielding Conferences Nov 00
- Fielding ILA Jan 01
- Fielding Decision Jan 01
- I MEF Fielding Jan 01
- III MEF Fielding Jan 01
- MARFORRES Fielding Jan 01
- ***IOC*** ***Feb 01***
- II MEF Fielding 4th Qtr FY 01
- Begin Retrofit 4th Qtr FY 01
- ***FOC (Retrofit complete)*** ***4th Qtr 02***

Retrofit Schedule

UNIT	<u>Anticipated</u> <u>Date</u>
7th Comm Bn	Complete
8th Comm Bn	Complete
9th Comm Bn	Complete
Force Recon, I MEF	Complete
Force Recon, II MEF	Complete
Deep Recon, 3rd MARDIV	Complete
Force Recon, MARFORRES	Partial
1st Radio BN	Complete
2nd Radio BN	Complete
Div Comm Co, 1st MARDIV	Partial
Div Comm Co, 2nd MARDIV	Complete

Retrofit Schedule (Cont)

Div Comm Co, 3rd MARDIV	Complete
Div Comm Co, 4th MARDIV	Partial
Recon Bn, 1st MARDIV	Partial
Recon Bn, 2nd MARDIV	Complete
Distance Recon, 3rd MARDIV	Complete
Recon Bn, 4th MARDIV	Partial
Inf Regt, 1st MARDIV	Complete
Inf Regt, 2nd MARDIV	Complete
Inf Regt, 3rd MARDIV	Complete
Inf Regt, 3rd MARDIV (HI)	Partial
Inf Regt, 4th MARDIV	Partial
Inf Bn, 1st MARDIV	Complete

Retrofit Schedule (Cont)

Inf Bn, 2nd MARDIV	Complete
Inf Bn, 3rd MARDIV	Partial
Inf Bn, 3rd MARDIV (HI)	Partial
Inf Bn, 4th MARDIV	Partial
EWTGLANT	Complete
EWTGPAC	Complete

Future Endeavors

- POM - 04/05 Submission
 - Additional 954 radios
 - 240 FY-04
 - 230 FY-05
 - Rolled up in the JTRS family of radios
 - Expansion of HF ALE Combat networks.
 - Will further lessen the readiness issue associated with legacy HF systems

Questions???

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